Diesel Electric Submarine Initiative Working Group

PROGRAM STATUS & CURRENT ISSUES (February 2004)

http://scon.csl.navy.smil.mil/N7/desi/desi.asp

. Rick Current
COMNAVSUBFOR N7A

Mr. Bill Knight
NUWC KPT

Agenda

- Administrative
  - Roster sheet & Self-introductions
- CFFC Instruction 3360.40 of 26 SEP 03
- CFFC Study – Diesel Submarine Fleet Exercise Training (Requirements & Options)
- DE Countries Update
- NATO partners participation
- Miscellaneous/Open forum
  - FASW Command
- Conclusion/Recap

Agenda

- CFFC Instruction 3360.40 of 26 SEP 03

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CFFC Study & Recommendation

- Study requested by CFFC to delineate
  - Program current funding
  - DE submarine requirements (LANT/PAC)
  - Recommended options
  - Fleet ASW support shortfalls
  - Program recommended future budget
- Completed in Dec 03 and forwarded to CNO (w/positive endorsement from CFFC)
  - CNO office currently reviewing

CFFC Study & Recommendation

- Options presented –

  Option A: Expanded Foreign Diesel Submarine Compensation Package

  *Preferred and recommended option

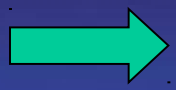
  * Fiscal expansion of current program (requirement $15 mil for DESUB support to both coast)

  * Four-year program w/support from 6 countries

  * Continued support to both coasts!!

CFFC Study & Recommendation

- Options presented –



Option B: Leased Foreign Diesel Submarine

* Researched and discussed throughout the study

* Would entail a 3-year lease from a foreign country (Sweden) (AIP platform preferable)

* Not endorsed:

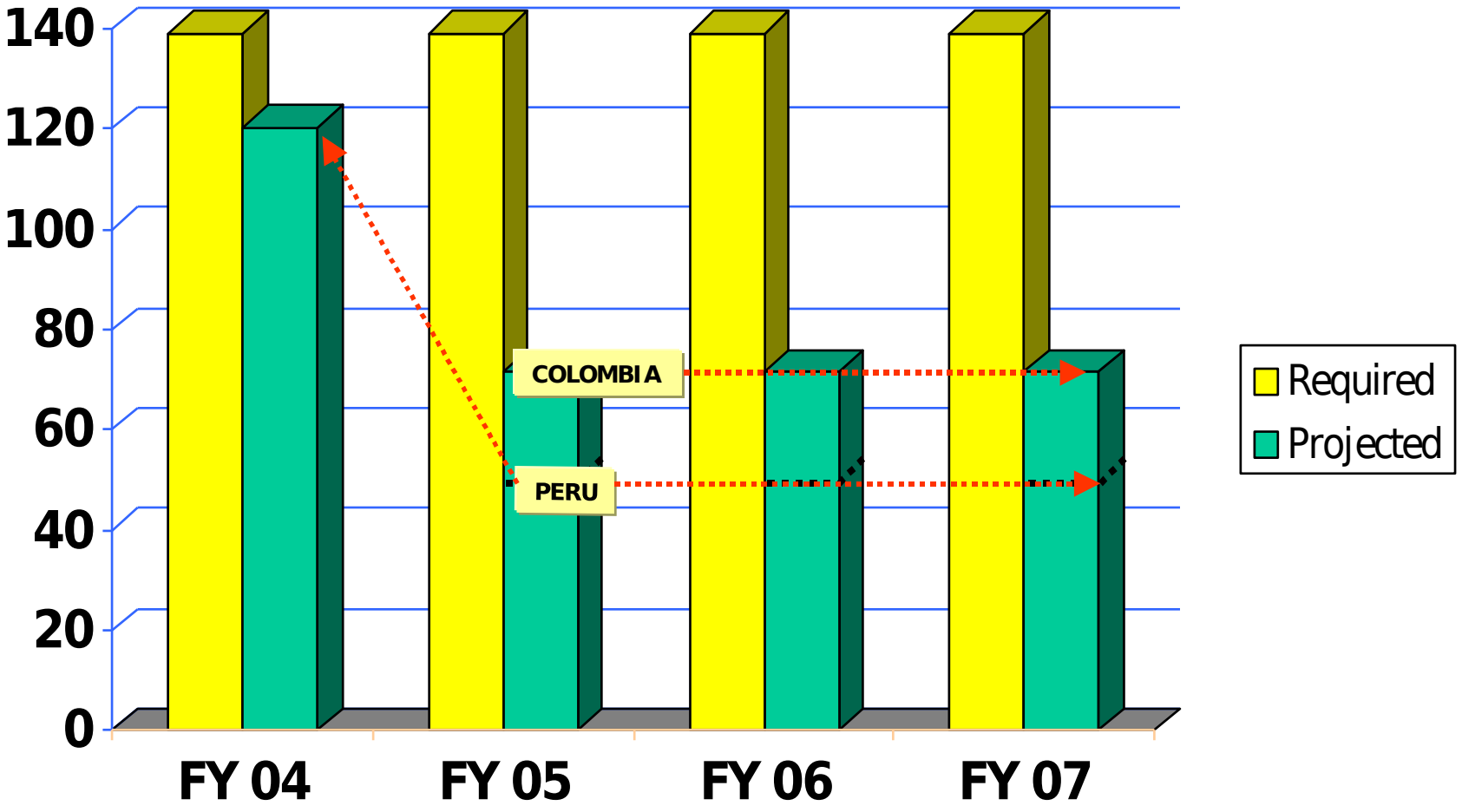
- Program too costly!!

- Limited fleet coverage

- Native crew vs. American crew?

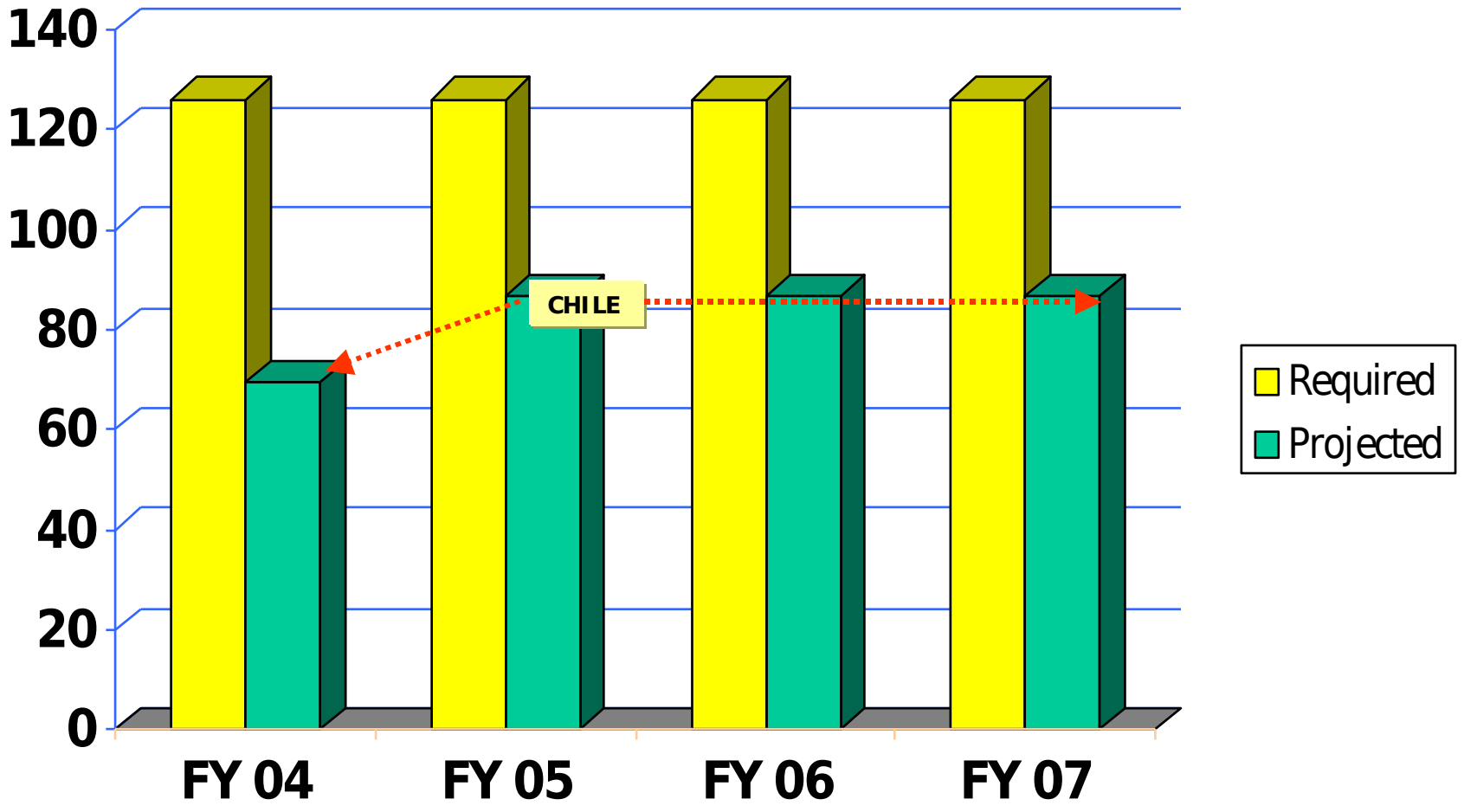
South American Diesel Electric
Fleet Support Initiative (LANTFLT Support Program)

Current Program
Operational Engagements (days)



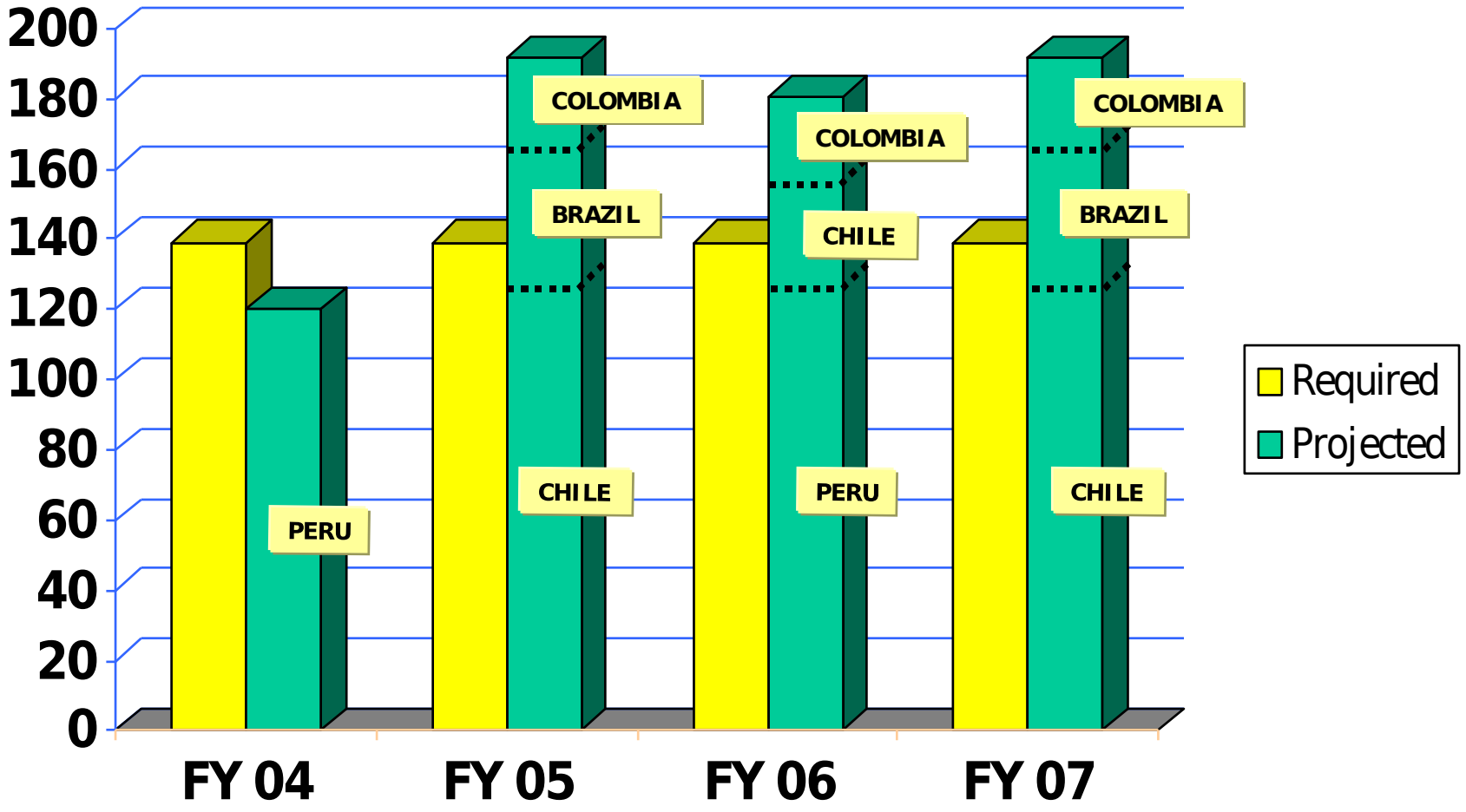
South American Diesel Electric
Fleet Support Initiative (PACTFLT Support Program)

Current Program
Operational Engagements (days)



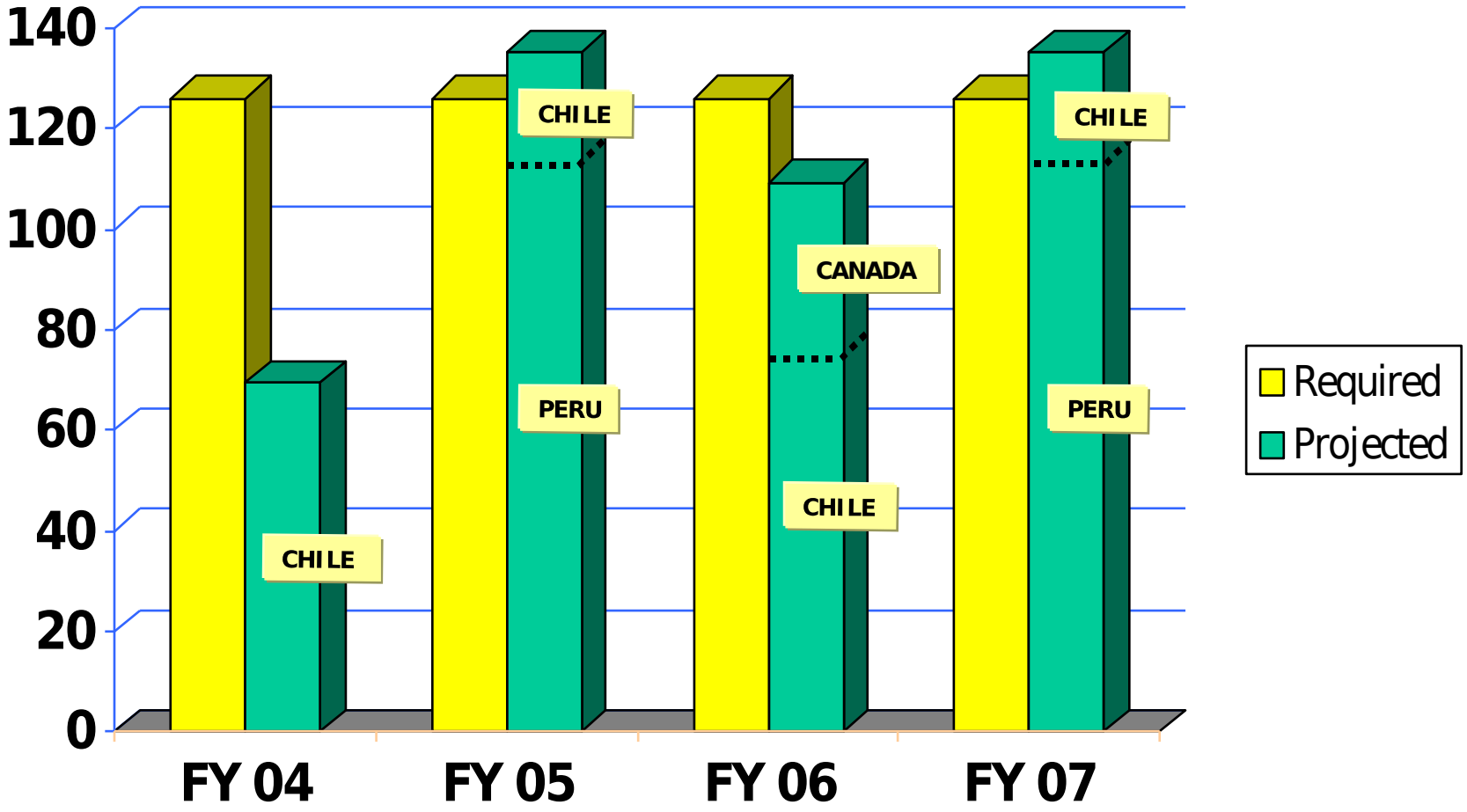
South American Diesel Electric
Fleet Support Initiative (LANTFLT Support Program)

Option A – $15 Million Fiscal Requirement
Operational Engagements (days)

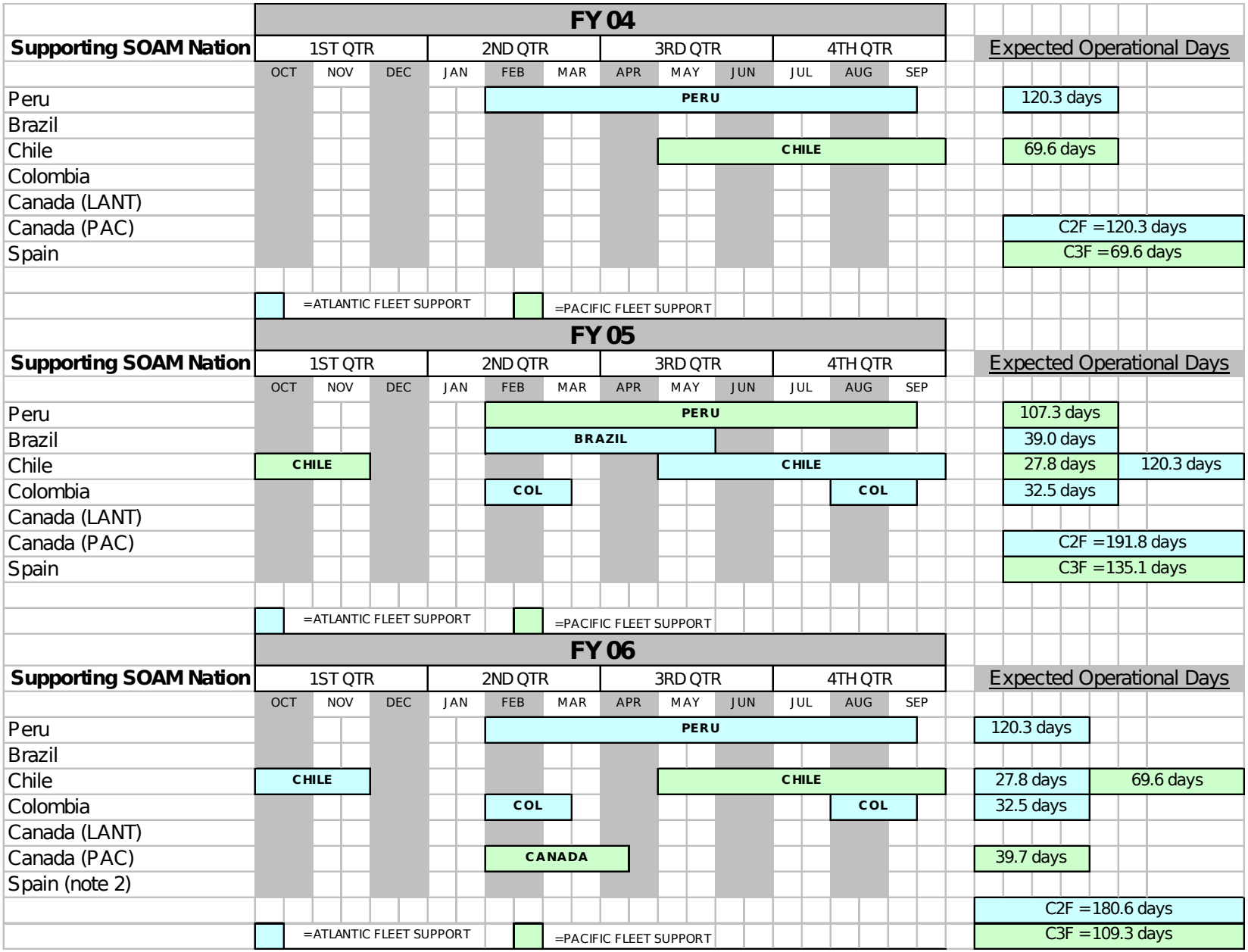


South American Diesel Electric
Fleet Support Initiative (PACFLT Support Program)

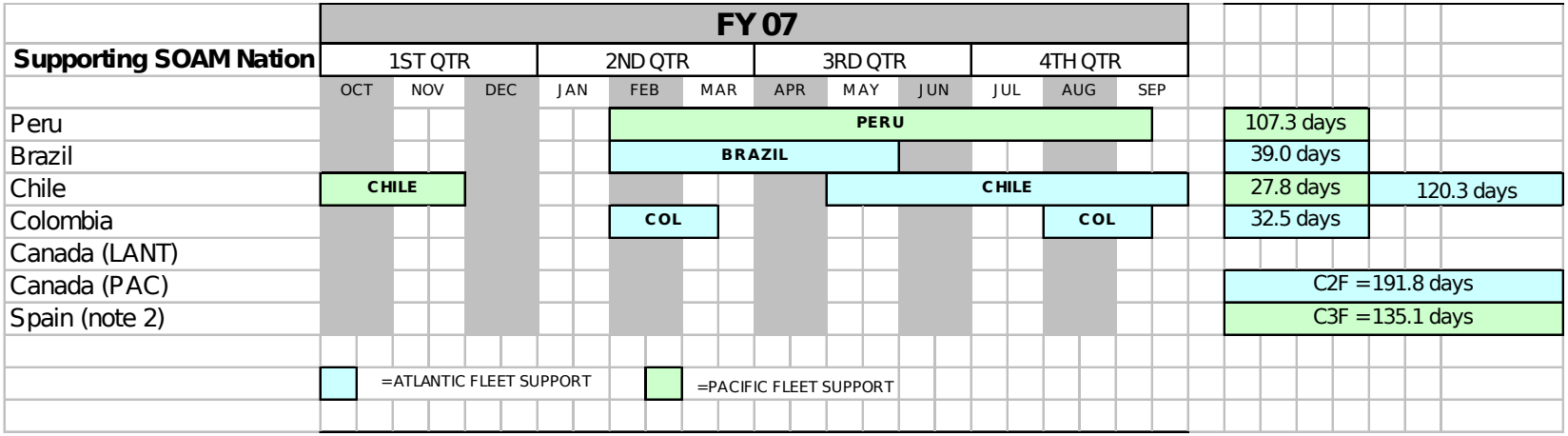
Option A – $15 Million Fiscal Requirement
Operational Engagements (days)



Expanded Program 4-year Employment Plan



Expanded Program 4-year Employment Plan



Expanded Program Budget Plan

Supporting SOAM Nation	TOAL 3-YEAR PLAN BUDGET REQUIREMENTS			
	Total	**FY-05**	**FY-06**	**FY-07**
Peru	$8,562,000	$5,187,333	$1,687,333	$1,687,333
Brazil	$2,430,000	$1,215,000	0	$1,215,000
Chile	$2,925,000	$975,000	$975,000	$975,000
Colombia	$1,350,000	$450,000	$450,000	$450,000
Canada	(no funding planned)			
Spain	(no funding planned)			
Total Requirement	**$15,267,000**	**$7,827,333**	**$3,112,333**	**$4,327,333**

BATTERY PURCHASE FOR PERU

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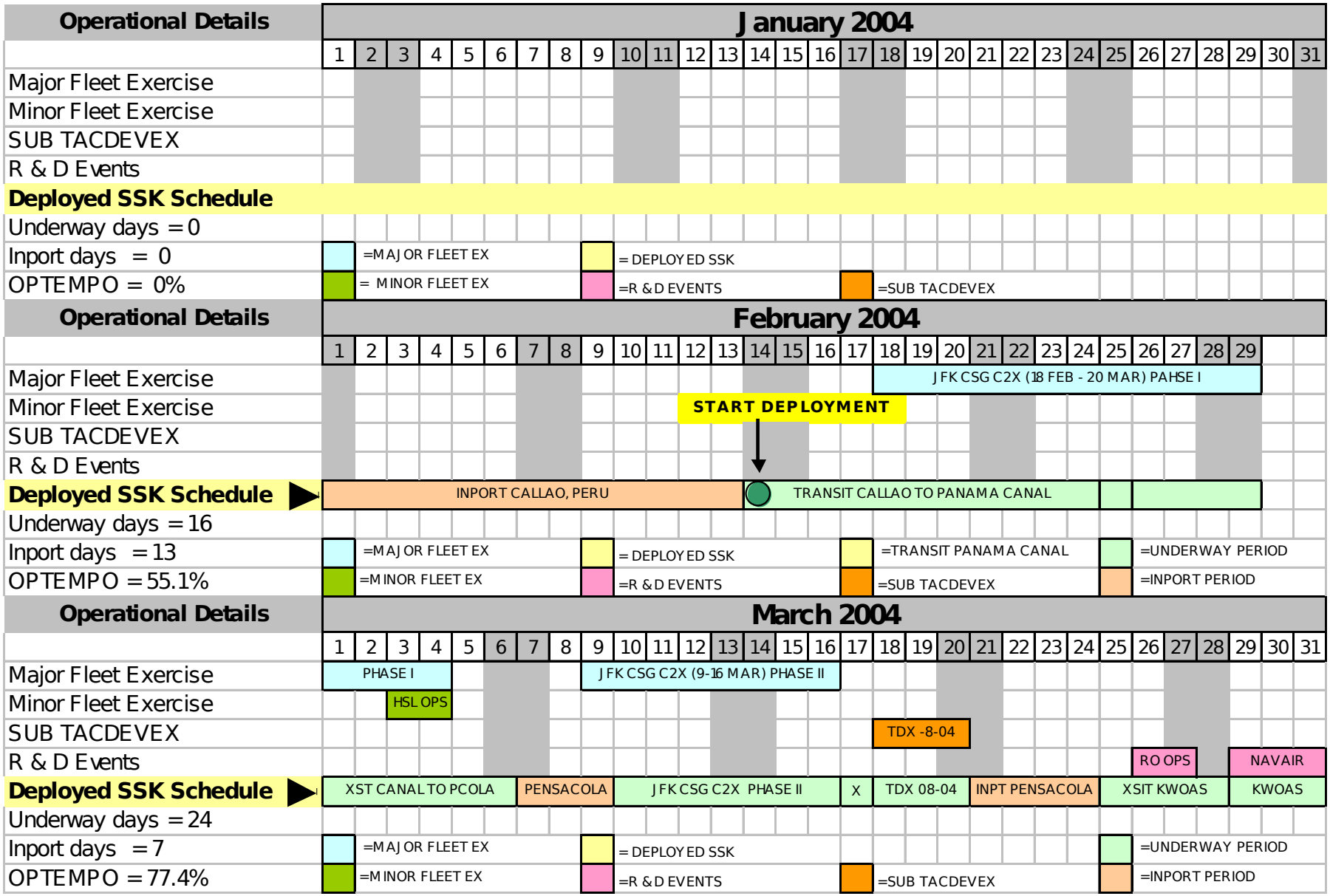
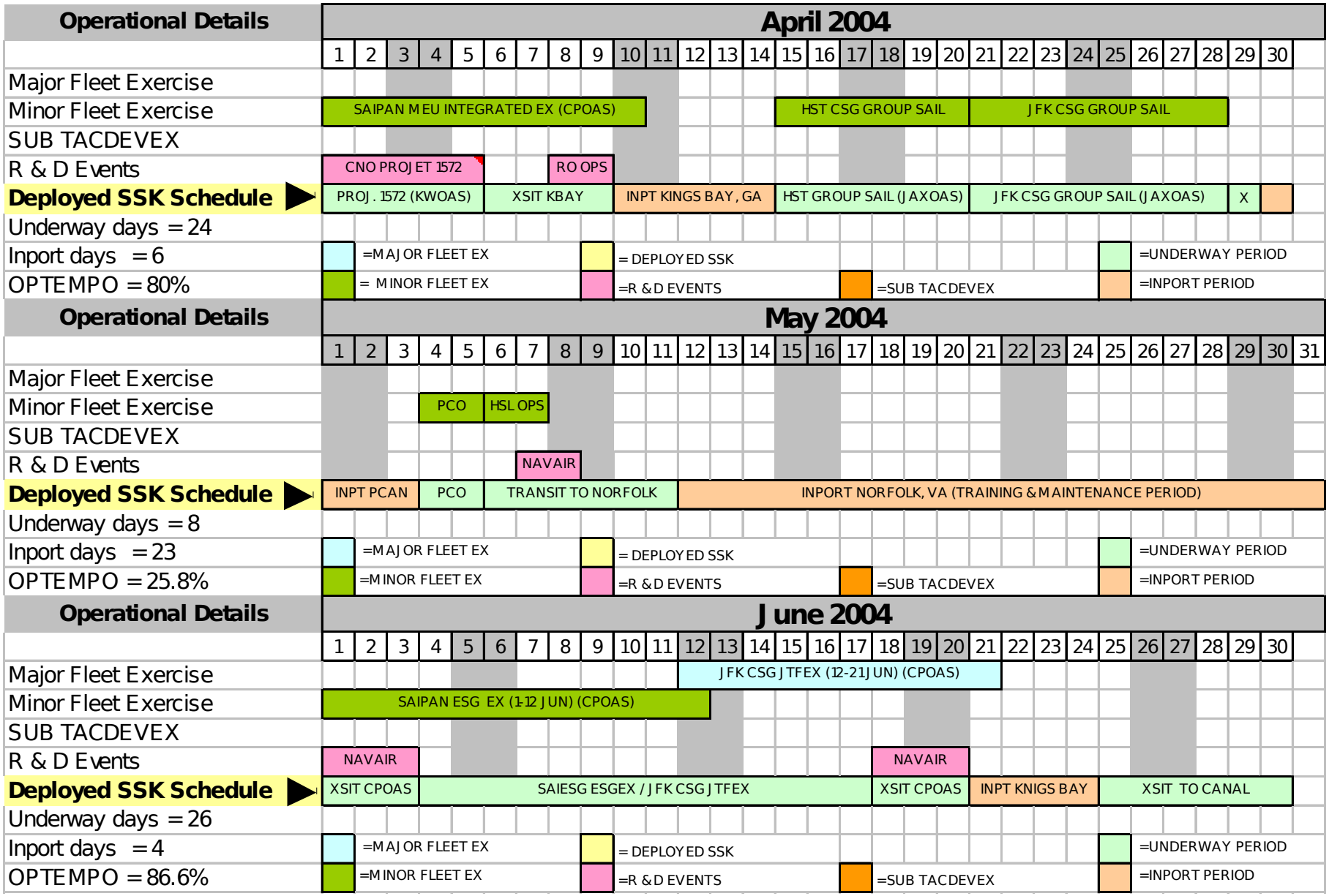
SOAM Countries Update - Peru

- Currently on their 3rd deployment to U.S. East Coast (success story!)
- Deployment length: 154 days (the longest!)
  - Total cost allocated: $1 mil
- Deployment is support of:
  - JFK CSG C2X & JTFEX
  - JAX & NORVA Group Sails
  - SAIPAN ESGEX
  - TACDEVEX
  - Several R&D events

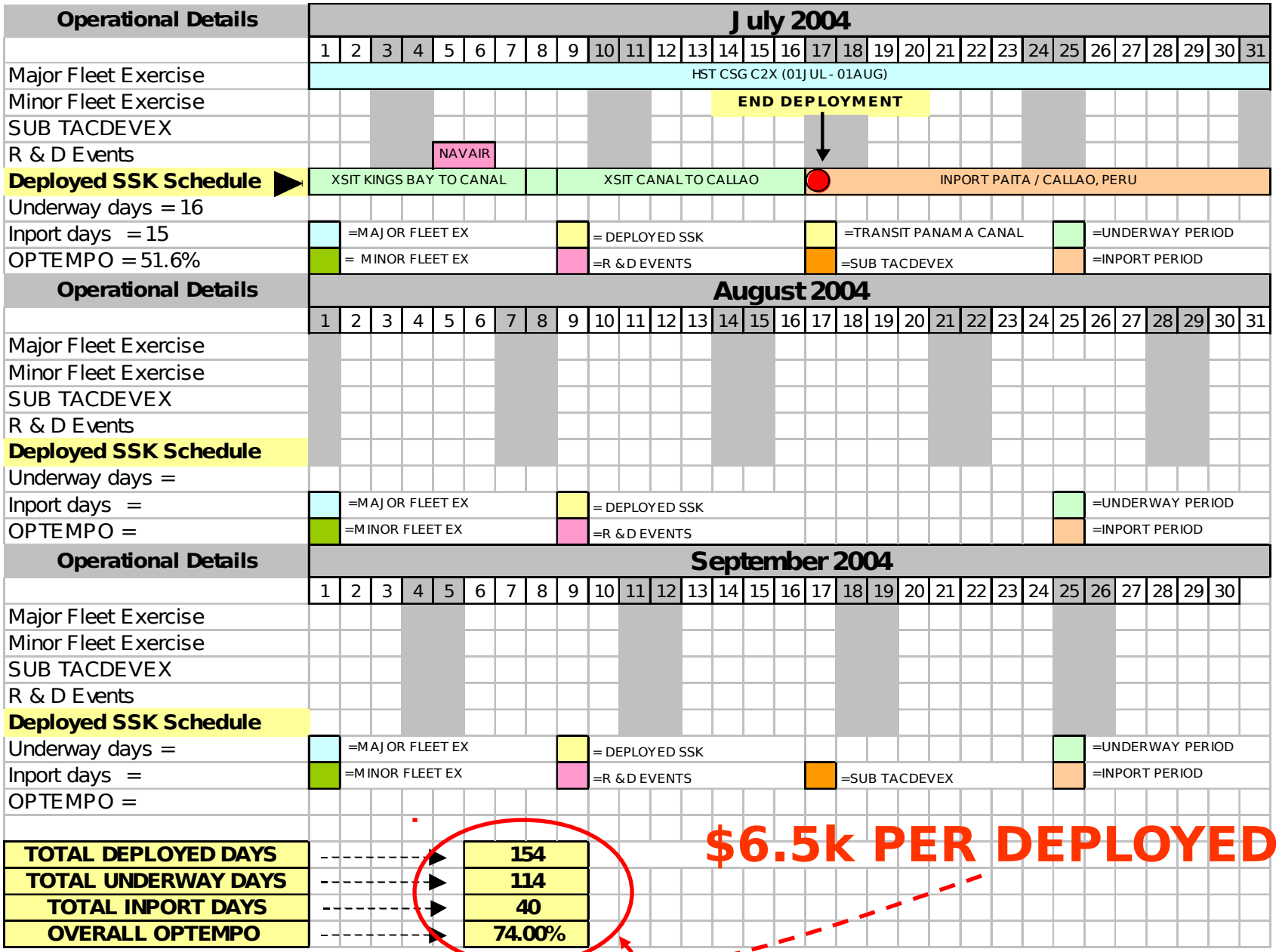
BAP ANGAMOS (S-31) Schedule


Operational Details
January 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SSK Schedule
Underway days = 0
Inport days = 0
OPTEMPO = 0%
=MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
=R & D EVENTS
=SUB TACDEVEX
Operational Details
February 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
Major Fleet Exercise
JFK CSG C2X (18 FEB - 20 MAR) PAHSE I
Minor Fleet Exercise
START DEPLOYMENT
SUB TACDEVEX
R & D Events
Deployed SSK Schedule
INPORT CALLAO, PERU
TRANSIT CALLAO TO PANAMA CANAL
Underway days = 16
Inport days = 13
OPTEMPO = 55.1%
=MAJOR FLEET EX
= DEPLOYED SSK
=TRANSIT PANAMA CANAL
=UNDERWAY PERIOD
=MINOR FLEET EX
=R & D EVENTS
=SUB TACDEVEX
=INPORT PERIOD
Operational Details
March 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
PHASE I
JFK CSG C2X (9-16 MAR) PHASE II
Minor Fleet Exercise
HSL OPS
SUB TACDEVEX
TDX -8-04
R & D Events
RO OPS
NAVAIR
Deployed SSK Schedule
XST CANAL TO PCOLA
PENSACOLA
JFK CSG C2X PHASE II
X
TDX 08-04
INPT PENSACOLA
XSIT KWOAS
KWOAS
Underway days = 24
Inport days = 7
OPTEMPO = 77.4%
=MAJOR FLEET EX
= DEPLOYED SSK
=UNDERWAY PERIOD
=MINOR FLEET EX
=R & D EVENTS
=SUB TACDEVEX
=INPORT PERIOD

BAP ANGAMOS (S-31) Schedule


Operational Details
April 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
Minor Fleet Exercise
SAIPAN MEU INTEGRATED EX (CPOAS)
HST CSG GROUP SAIL
JFK CSG GROUP SAIL
SUB TACDEVEX
R & D Events
CNO PROJET 1572
RO OPS
Deployed SSK Schedule
PROJ. 1572 (KWOAS)
XSIT KBAY
INPT KINGS BAY, GA
HST GROUP SAIL (JAXOAS)
JFK CSG GROUP SAIL (JAXOAS)
X
Underway days = 24
Inport days = 6
OPTEMPO = 80%
=MAJOR FLEET EX
= DEPLOYED SSK
=UNDERWAY PERIOD
= MINOR FLEET EX
=R & D EVENTS
=SUB TACDEVEX
=INPORT PERIOD
Operational Details
May 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
PCO
HSL OPS
SUB TACDEVEX
R & D Events
NAVAIR
Deployed SSK Schedule
INPT PCAN
PCO
TRANSIT TO NORFOLK
INPORT NORFOLK, VA (TRAINING & MAINTENANCE PERIOD)
Underway days = 8
Inport days = 23
OPTEMPO = 25.8%
=MAJOR FLEET EX
= DEPLOYED SSK
=UNDERWAY PERIOD
=MINOR FLEET EX
=R & D EVENTS
=SUB TACDEVEX
=INPORT PERIOD
Operational Details
June 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
JFK CSG JTFEX (12-21JUN) (CPOAS)
Minor Fleet Exercise
SAIPAN ESG EX (1-12 JUN) (CPOAS)
SUB TACDEVEX
R & D Events
NAVAIR
NAVAIR
Deployed SSK Schedule
XSIT CPOAS
SAIESG ESGEX / JFK CSG JTFEX
XSIT CPOAS
INPT KNIGS BAY
XSIT TO CANAL
Underway days = 26
Inport days = 4
OPTEMPO = 86.6%
=MAJOR FLEET EX
= DEPLOYED SSK
=UNDERWAY PERIOD
=MINOR FLEET EX
=R & D EVENTS
=SUB TACDEVEX
=INPORT PERIOD

BAP ANGAMOS (S-31) Schedule


Operational Details
July 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
HST CSG C2X (01JUL - 01AUG)
Minor Fleet Exercise
END DEPLOYMENT
SUB TACDEVEX
R & D Events
NAVAIR
Deployed SSK Schedule
XSIT KINGS BAY TO CANAL
XSIT CANAL TO CALLAO
INPORT PAITA / CALLAO, PERU
Underway days = 16
Inport days = 15
OPTEMPO = 51.6%
=MAJOR FLEET EX
= DEPLOYED SSK
=TRANSIT PANAMA CANAL
=UNDERWAY PERIOD
= MINOR FLEET EX
=R &D EVENTS
=SUB TACDEVEX
=INPORT PERIOD
Operational Details
August 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SSK Schedule
Underway days =
Inport days =
OPTEMPO =
=MAJOR FLEET EX
= DEPLOYED SSK
=UNDERWAY PERIOD
=MINOR FLEET EX
=R &D EVENTS
=INPORT PERIOD
Operational Details
September 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SSK Schedule
Underway days =
Inport days =
OPTEMPO =
=MAJOR FLEET EX
= DEPLOYED SSK
=UNDERWAY PERIOD
=MINOR FLEET EX
=R &D EVENTS
=SUB TACDEVEX
=INPORT PERIOD
TOTAL DEPLOYED DAYS
154
TOTAL UNDERWAY DAYS
114
TOTAL INPORT DAYS
40
OVERALL OPTEMPO
74.00%
$6.5k PER DEPLOYED DA

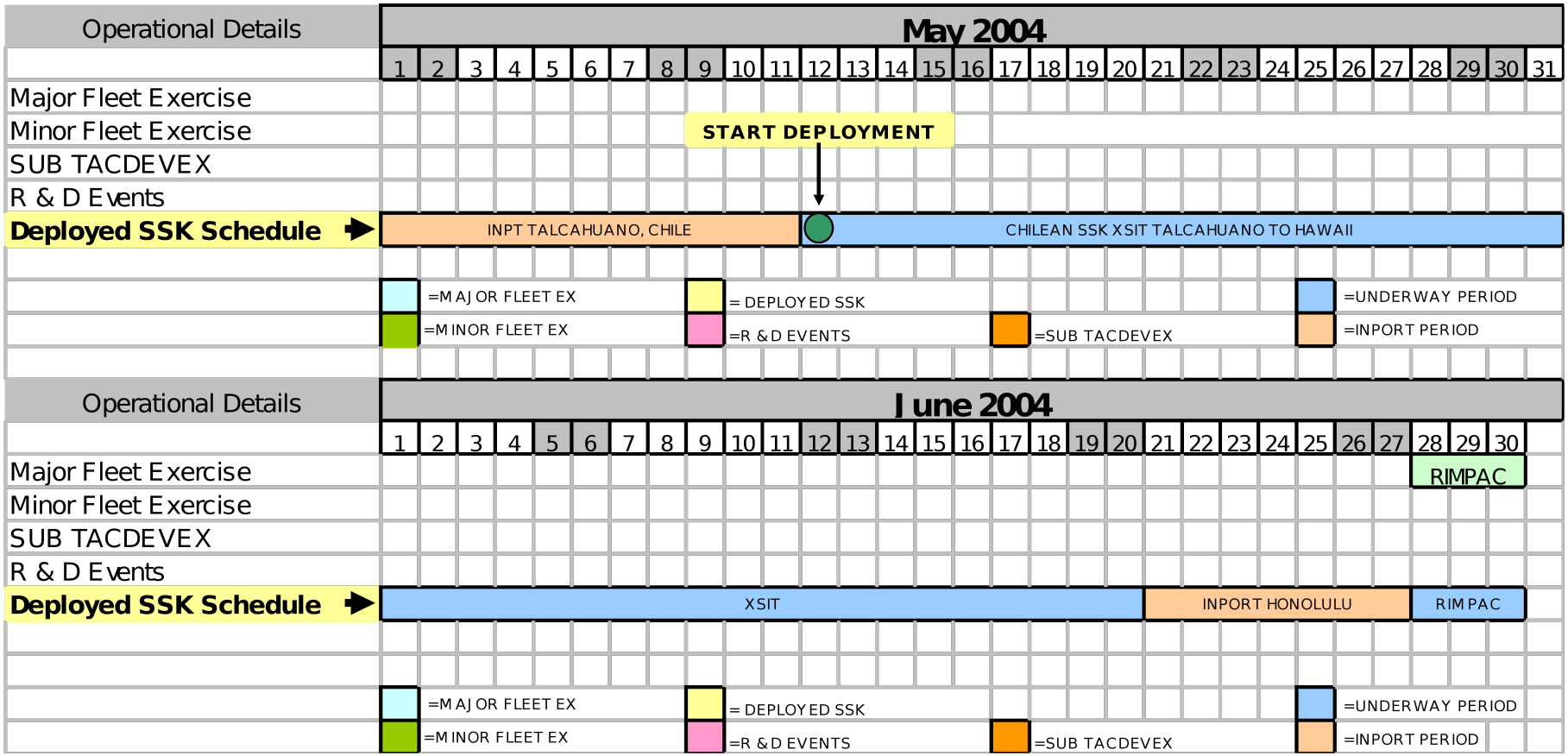
SOAM Countries Update - Peru

- Potential “Show-Stopper” to the bilateral program:
  - MGP has indicated that unless a battery is purchased during CY04, subs will not be able to continue deployments to any coast!
  - Funding (~$3.5 mil) for a battery system has been included in budget plan (CFFC Study)
  - MGP has agreed to a 5-year commitment if battery is funded
  - CSF closely following new developments…

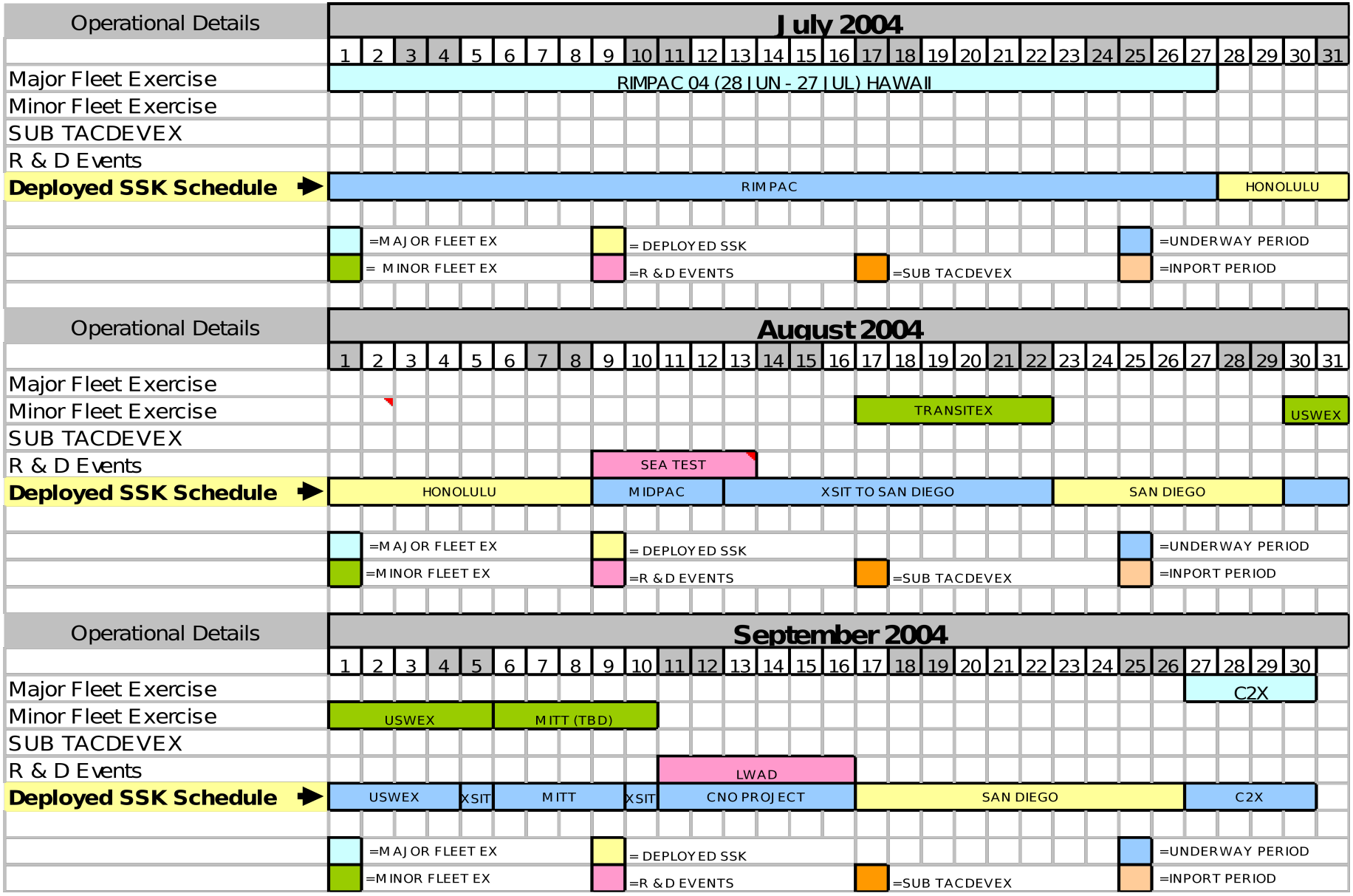
SOAM Countries Update - Chil

- Working out details for a deployment to SOCAL (post RIMPAC 04)
  - C3F/COMPACFLT/NUWC KPT coordinating
- Taking delivery of SCORPENE Class in late Summer 04
  - Possible transit trough Panama Canal
  - Investigating possibilities for AUTEC TDX
- Plan for LANT deployment in 2005
  - If battery is funded, plan for Peru to deploy PAC in 05
- LOFAR training request in progress
  - Submarine Learning Center (SLC) has lead…

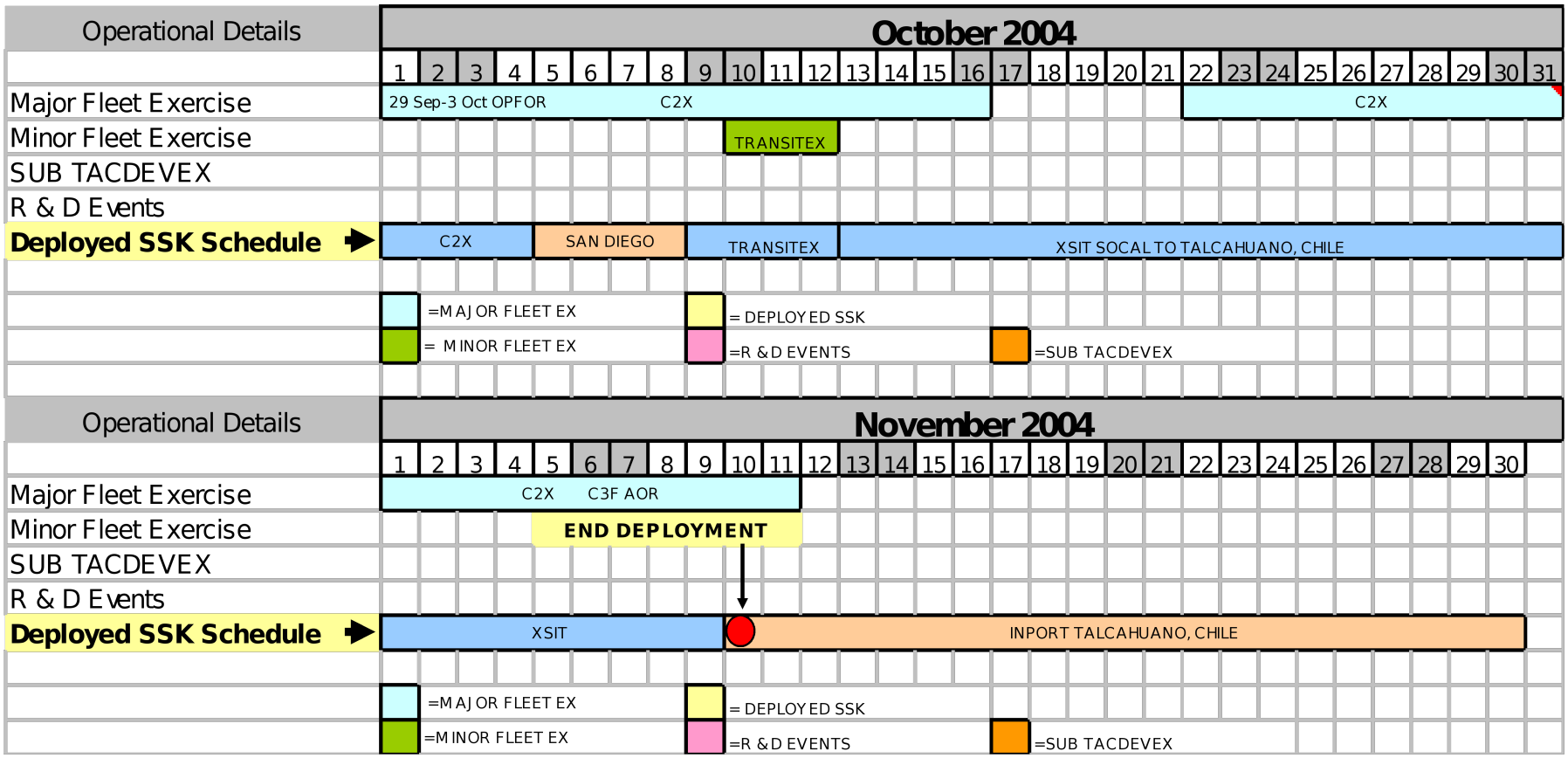
Proposed Chile Deployment (MAY/JUN 04)


Operational Details
May 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
START DEPLOYMENT
SUB TACDEVEX
R & D Events
Deployed SSK Schedule
INPT TALCAHUANO, CHILE
CHILEAN SSK XSIT TALCAHUANO TO HAWAII
=MAJOR FLEET EX
= DEPLOYED SSK
=UNDERWAY PERIOD
=MINOR FLEET EX
=R &D EVENTS
=SUB TACDEVEX
=INPORT PERIOD
Operational Details
June 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
RIMPAC
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SSK Schedule
XSIT
INPORT HONOLULU
RIMPAC
=MAJOR FLEET EX
= DEPLOYED SSK
=UNDERWAY PERIOD
=MINOR FLEET EX
=R &D EVENTS
=SUB TACDEVEX
=INPORT PERIOD

Proposed Chile Deployment (JUL/SEP 04)



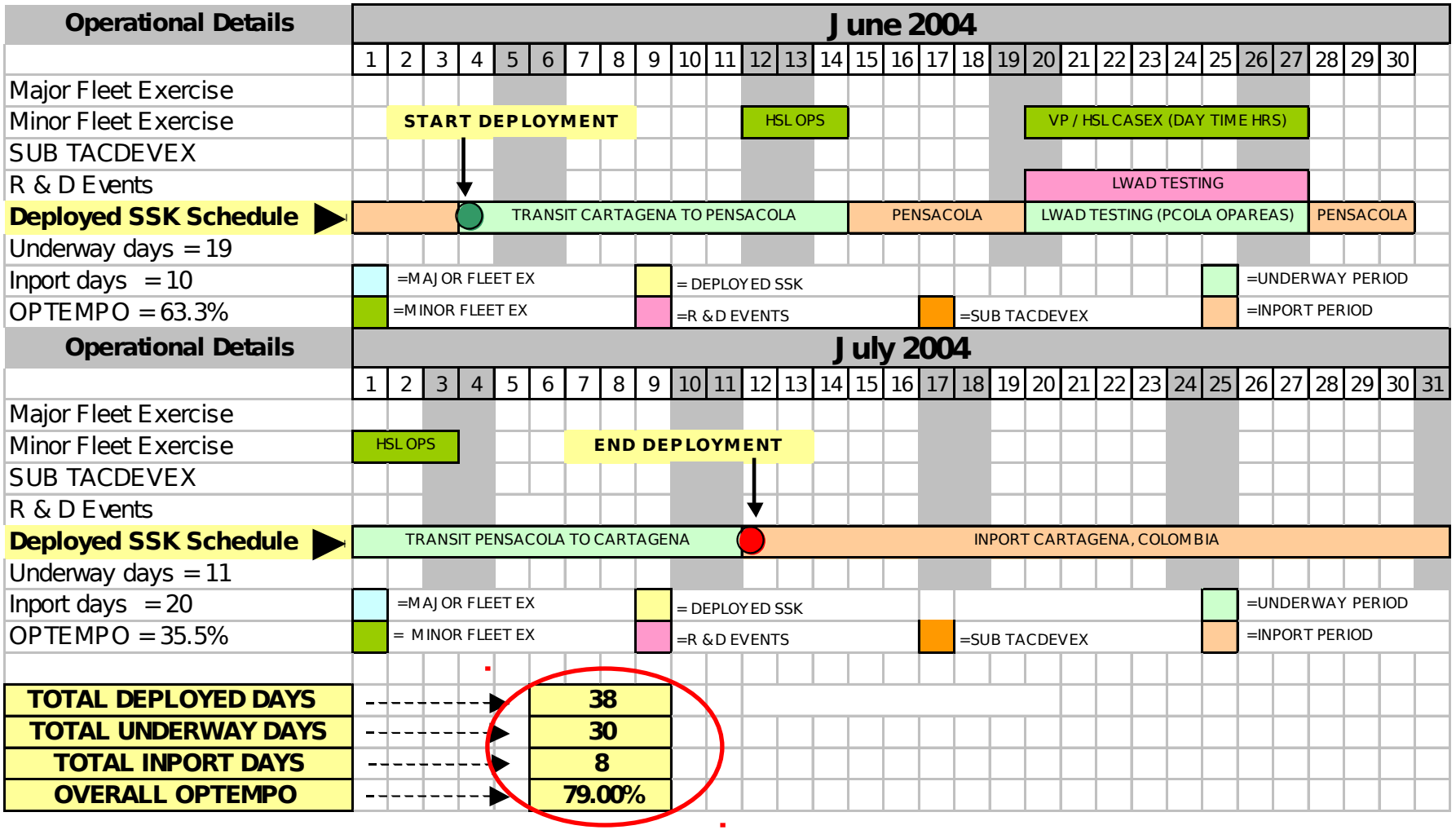
Proposed Chile Deployment (OCT/NOV 04)


Operational Details
October 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
29 Sep-3 Oct OPFOR
C2X
C2X
Minor Fleet Exercise
TRANSITEX
SUB TACDEVEX
R & D Events
Deployed SSK Schedule
C2X
SAN DIEGO
TRANSITEX
XSIT SOCAL TO TALCAHUANO, CHILE
=MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
=R & D EVENTS
=SUB TACDEVEX
Operational Details
November 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
C2X C3F AOR
Minor Fleet Exercise
END DEPLOYMENT
SUB TACDEVEX
R & D Events
Deployed SSK Schedule
XSIT
INPORT TALCAHUANO, CHILE
=MAJOR FLEET EX
= DEPLOYED SSK
=MINOR FLEET EX
=R & D EVENTS
=SUB TACDEVEX

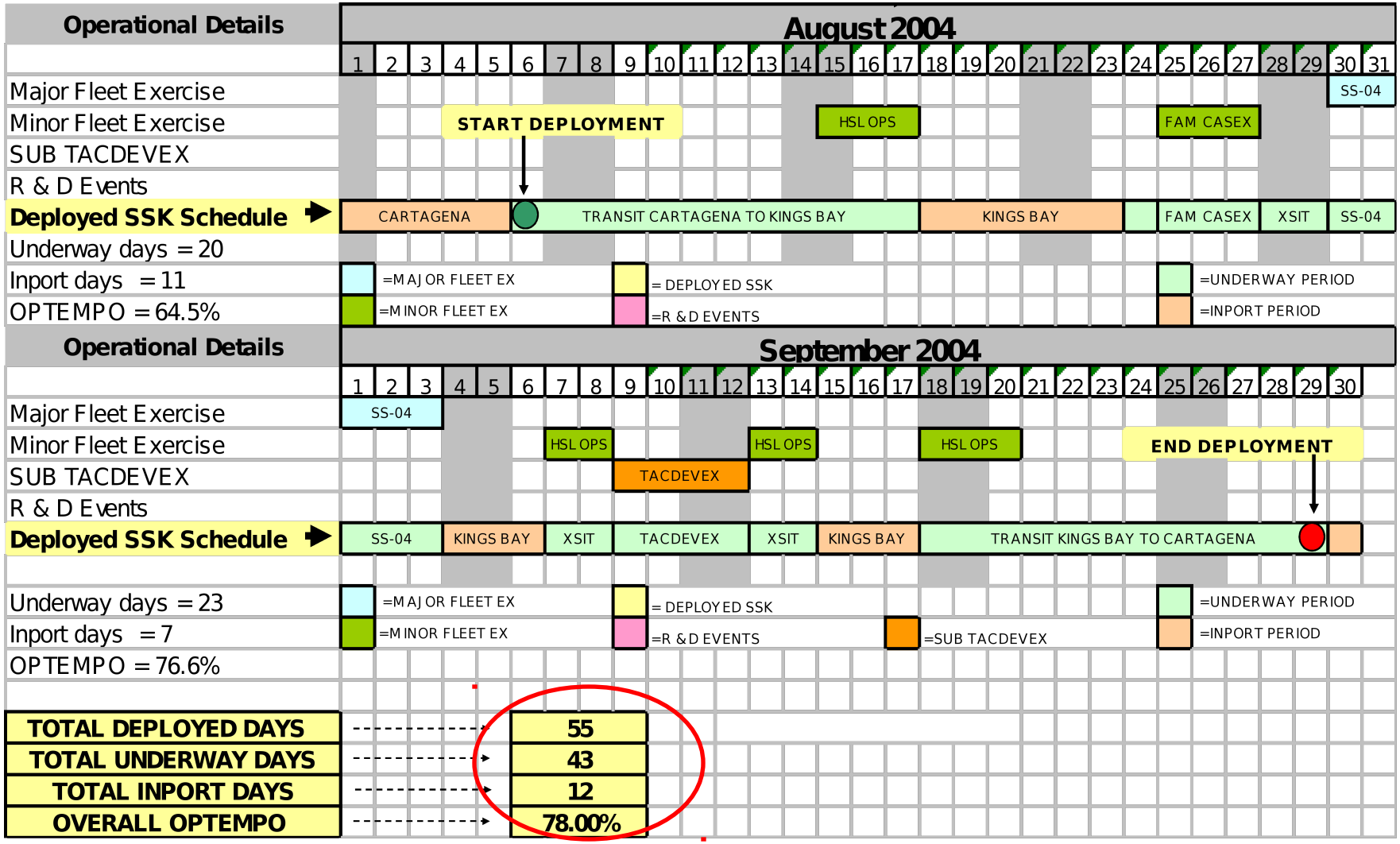
SOAM Countries Update - Colomb

- CSF participating at ONC Meeting this week
  - Coordinating FY04 proposed deployments
  - Proposing 2 deployments in 04 (LANT)
    - Jun/Jul 04: ONR LWAD support/HSL CASEXs
    - Aug/Sep 04: SMART SEARCH 04 & APB04 Testing TACDEVEX
  - Limiting deployments not-to-exceed 55 days
    - Limited forward-deploying experience
  - Plans for expanded participation in 05 and beyond…

Proposed Colombia Deployment (JUN/JUL 04)



Proposed Colombia Deployment (AUG/SEP 04)



SOAM Countries Update - Brazil

- Extremely interested in deploying to East Coast!
- CSF to brief RADM Lawrence (Brazil Naval Attaché in DC) in March
- CSF coordinating with CUSNS for official invite letter
- Expect support available only in support of LANT requirements

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NATO Partners Participation

- Canada
  - VICTORIA Class presence on both coasts
  - CSF will host Joint CAN/US talks in late April (NORVA)
    - Discussion on possible participation in late 04 (LANT)
    - If attending, please contact Mr. Juan Fernandez
- Spain
  - Interested in deploying in 2005 (LANT)
  - CSF will visit Madrid in Jul 04 for initial discussions

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Other Issues

- Maritime Inertial Navigation System (MINS)
  - Procured a total of 6 units
  - MINS 1 currently on loan from Vendor
  - Will install onboard ANGAMOS for use during entire deployment – many agencies benefiting from this!!
  - Expect ordered units to arrive through Spring
    - CSDS-12 to maintain custody (initially), working on install/removal procedures
  - Install/Removal funding
    - For Peru – defrayed by deployment TRS funds
    - Future funding???

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Questions or Comments...

OK then, Let’s Party!!

Other Countries

- Venezuela
  - Interested in conducting TACDEVEX in PROAs
    - Current Political flux preventing participation
    - Future support unknown in view of AFWTF's closing
- Argentina & Ecuador
  - Have increased their interest in deploying to participate in US Exercises as a result of Peruvian deployment
- Poland
  - Continues to make progress toward participation

Misc. Items

- Diesel Electric Submarine Initiative Working Group (DESIWG)
  - 5th meeting held in Norfolk (pre-ASWIP) 14 July 2003
  - Discussions:
    - DESI Program Status report
    - Draft instruction for SOAM Diesel Electric Submarine Initiative
      - (CFFC has now signed the instruction)
    - COMNAVSUBFOR is Program Lead for CFFC
      - NUWC Keyport coordinating efforts in PAC
    - Program Resources
      - Need for a coordinated “voice”
      - Need to equitably distribute limited dollars
        - » Current LANT funding under Training Resource

Misc. Items

- Periscope Upgrade Initiative (Colombia)
  - Purpose: To upgrade Colombia's 209 submarine periscope capability to include Light Enhancement
    - History – Discussions held w/COMNAVSOUTH Fall 01
      - CAPT Read (CUSNS N3) & CSL N5/N7
      - Funding "could be" available through JIATF-EAST
        - » Other funding sources – FMS or "Plan Colombia"
  - Current status:
    - CUSNS will fund site survey
    - Survey will determine upgrade capability and cost
    - CSL N754 to coordinate visit w/CDR Pete Houston (Chief, US Naval Mission to Colombia)

Misc. Items

- Marine Inertial Navigation System (MINS)
  - Portable “Ring Laser Gyro”
  - Conducted “on-range” testing onboard ANTOFAGASTA
    - AUTEC (Nov 02)
  - Conducted “open ocean” testing onboard ANGAMOS
  - Dynamic at-sea/anchored alignment and initialization
  - Highly reliable
    - CSDS 12 compared against AUTEC “ground truth” & MIAMI RLGN performance
    - Comparably “low cost” vs. Range Time
      - $250K per unit!

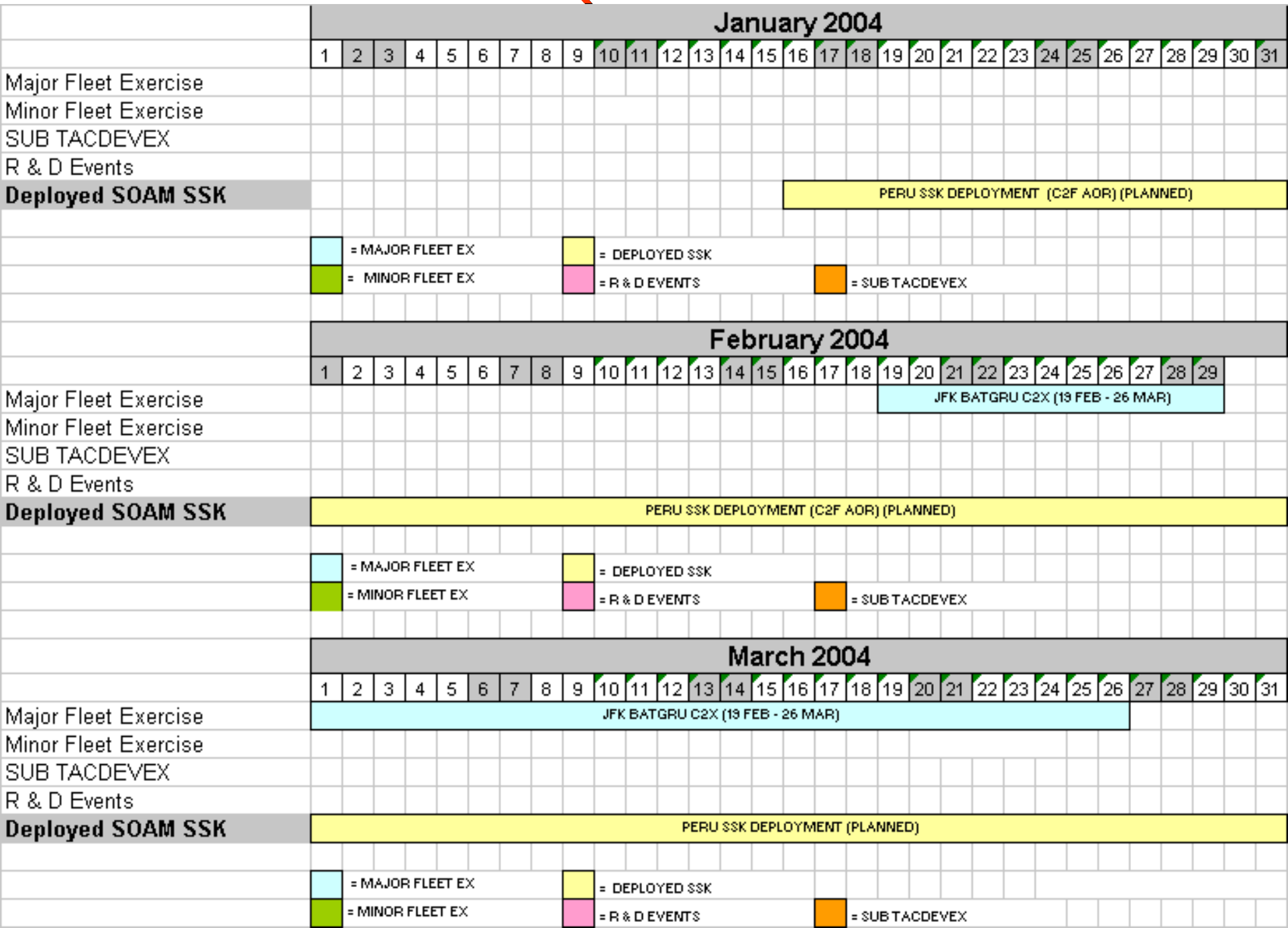
Misc. Items

- Why MINS II is needed…
  - Safety
    - Three recent exercises where SSK out-of-area
  - SSK DR is not accurate enough to ensure reliable reconstruction for tactical development or exercise/project evaluation
- Benefits
  - Assist in preventing out-of-area incidents
  - Exercise will yield better results
    - No longer limited to AUTEC geographical area
    - Real littoral experimentation!!
  - Data output is denser and better quality for

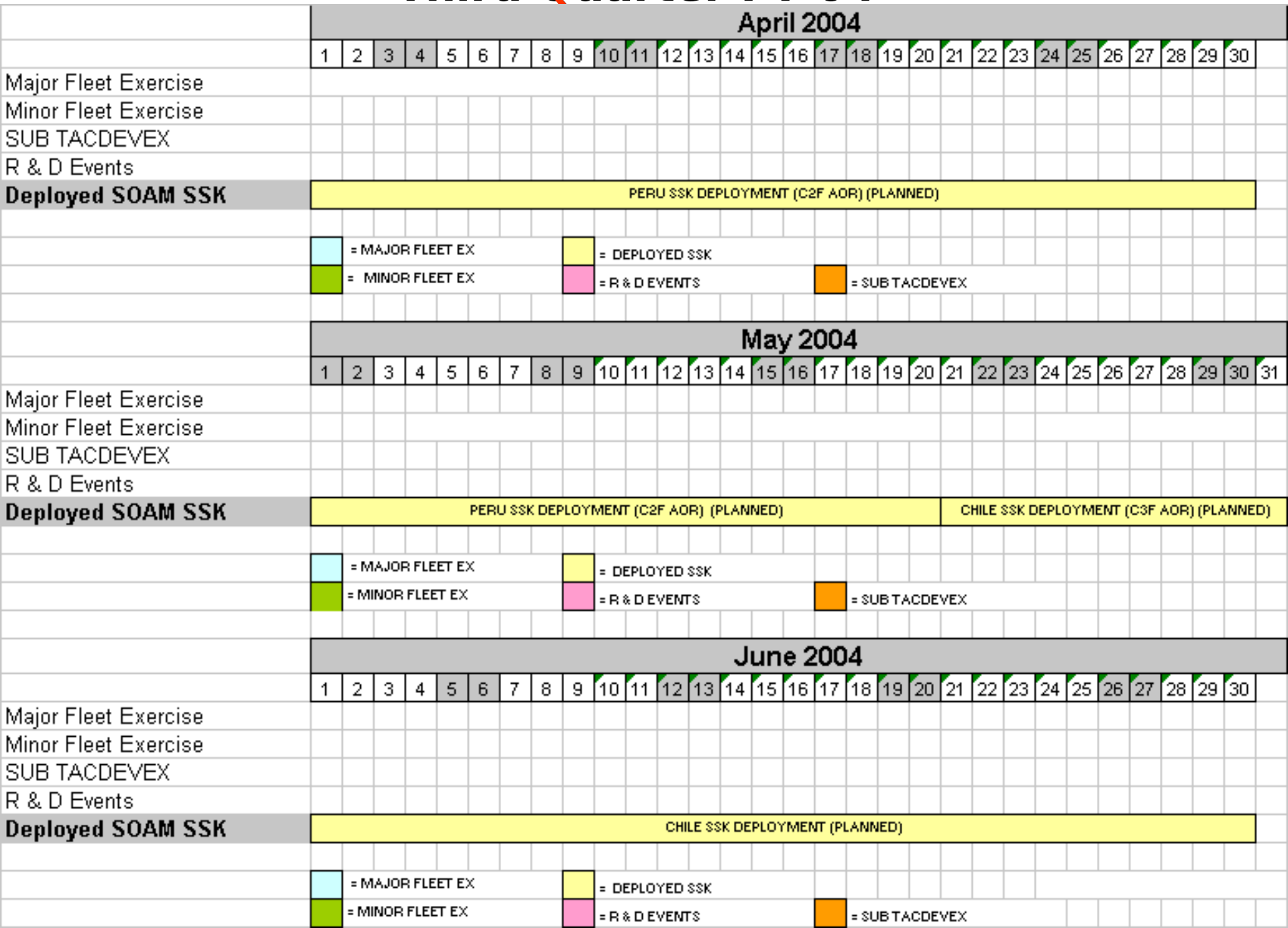
Schedules (Near and Far)

- The next several slides represent the current estimates of opportunities for DE submarines to interact with US Navy forces in exercises and projects
- Estimated times for major Fleet Exercises is the carrot to attract the foreign navies
- The resultant foreign submarine presence attracts S&T T&E projects
- Once the first two are linked, remaining timeframes are filled

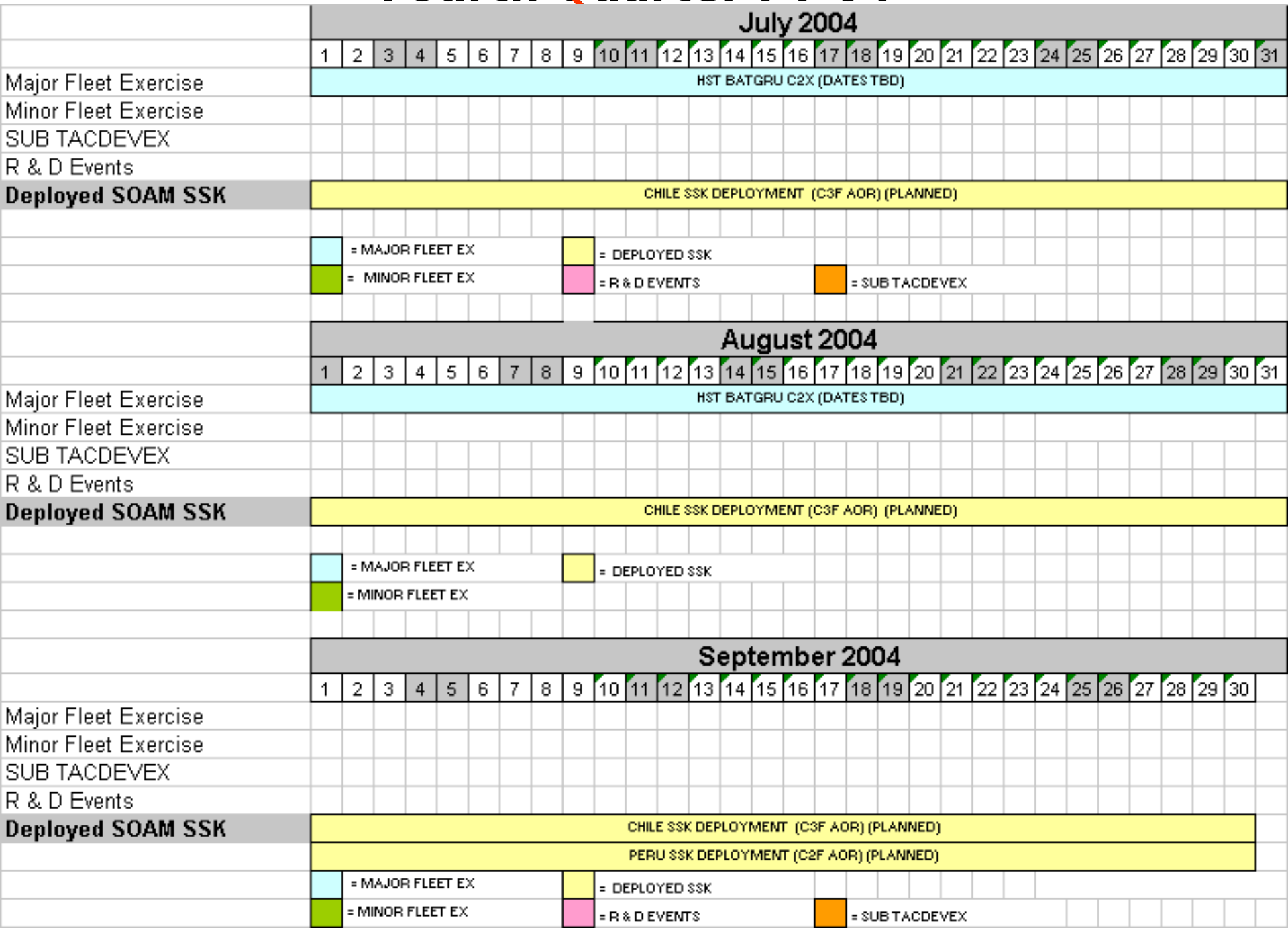
Second Quarter FY 04


January 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
February 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
Major Fleet Exercise
JFK BATGRU C2X (19 FEB - 26 MAR)
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
March 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
JFK BATGRU C2X (19 FEB - 26 MAR)
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX

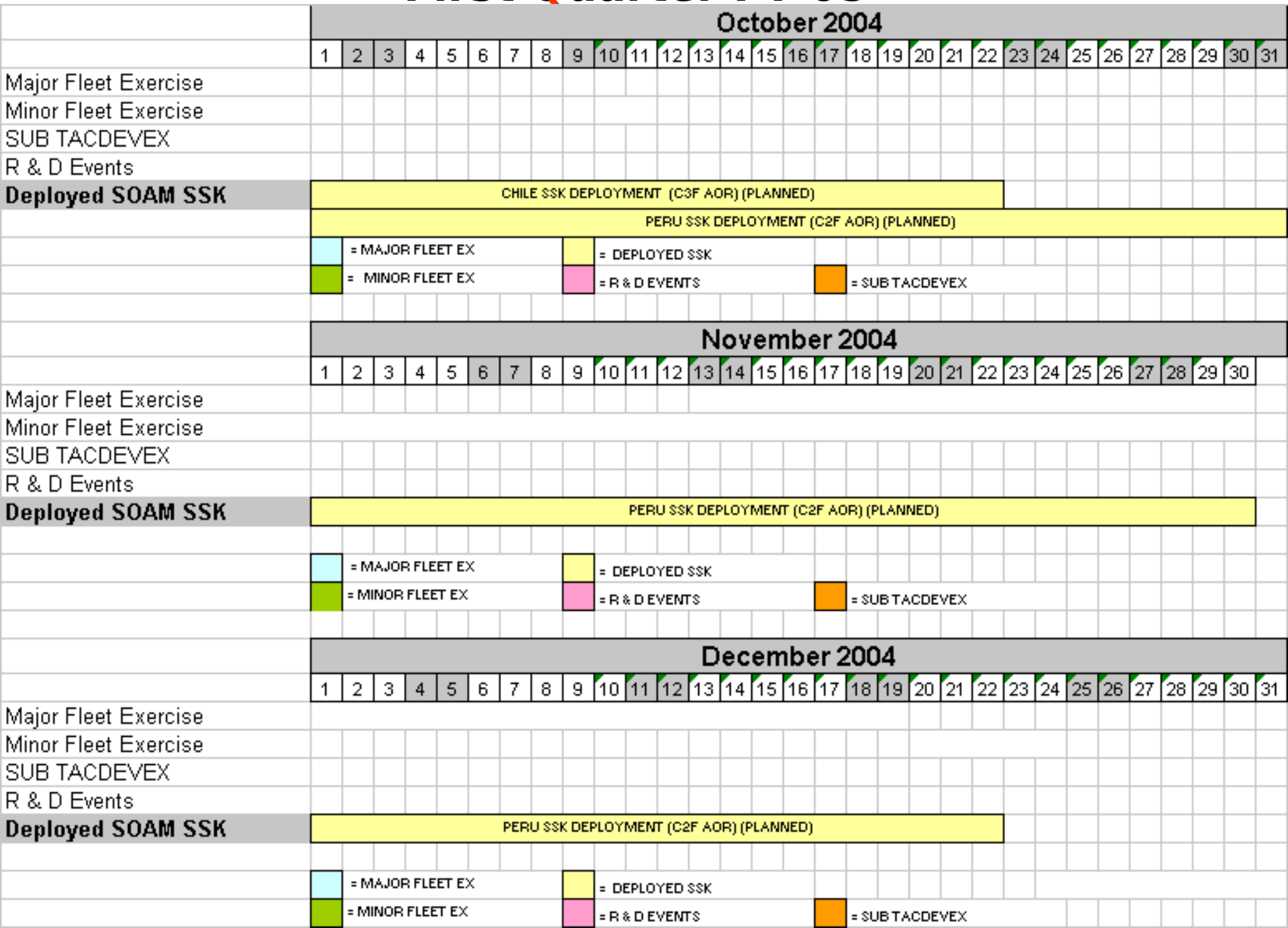
Third Quarter FY 04


April 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
May 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
CHILE SSK DEPLOYMENT (C3F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
June 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
CHILE SSK DEPLOYMENT (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX

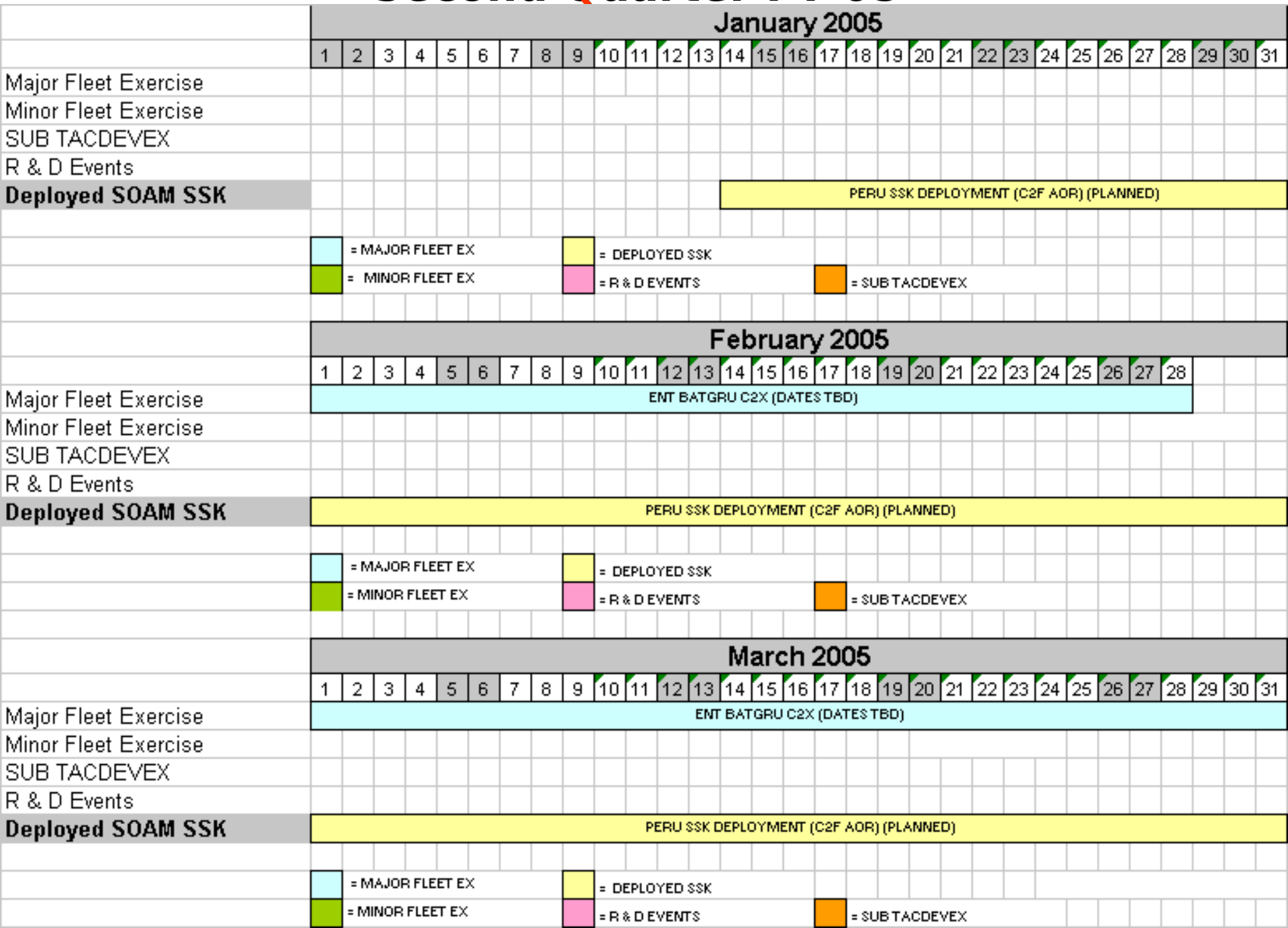
Fourth Quarter FY 04


July 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
HST BATGRU C2X (DATES TBD)
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
CHILE SSK DEPLOYMENT (C3F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
August 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
HST BATGRU C2X (DATES TBD)
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
CHILE SSK DEPLOYMENT (C3F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
September 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
CHILE SSK DEPLOYMENT (C3F AOR) (PLANNED)
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX

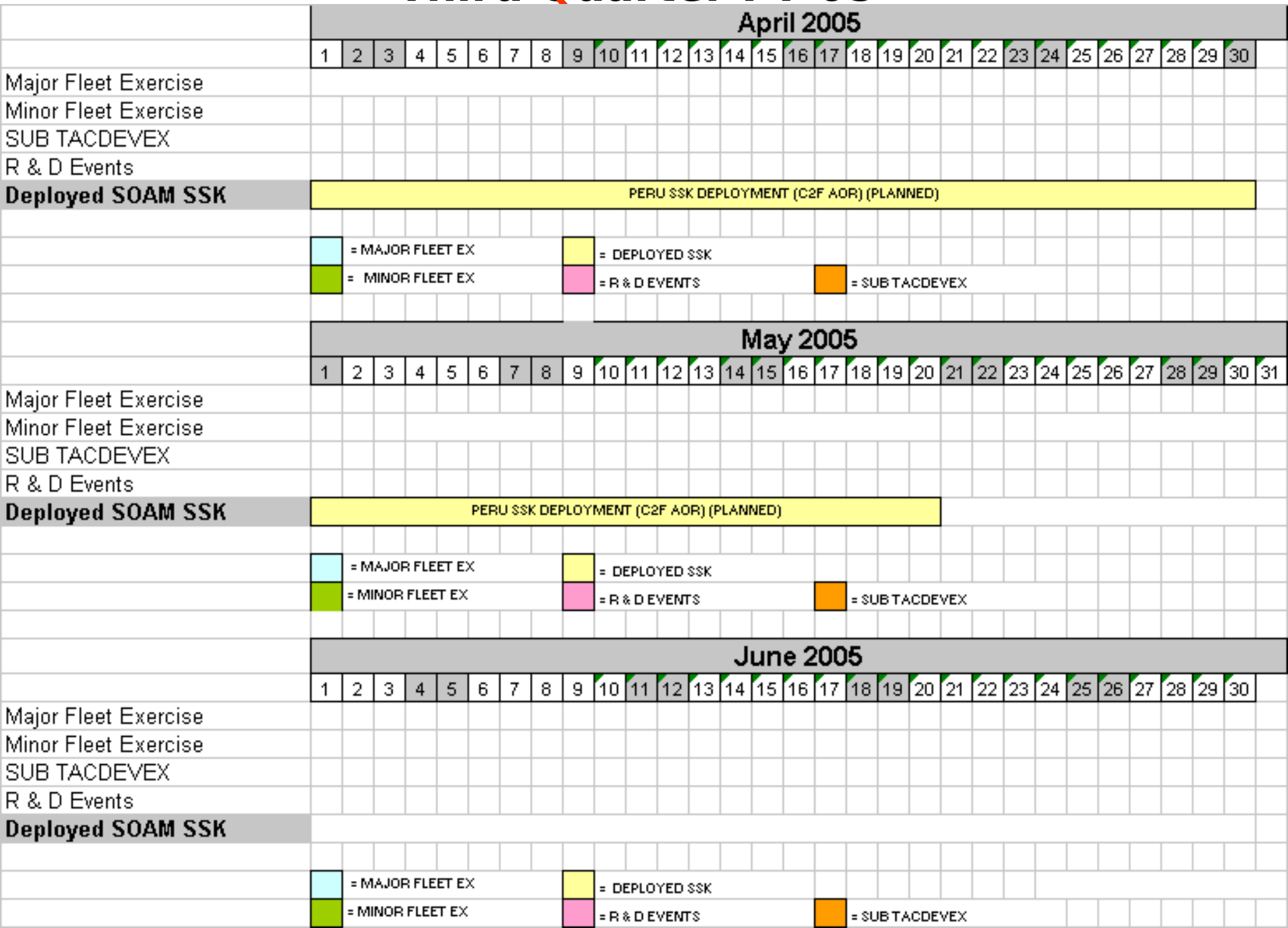
First Quarter FY 05


October 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
CHILE SSK DEPLOYMENT (C3F AOR) (PLANNED)
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
November 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
December 2004
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX

Second Quarter FY 05


January 2005
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
February 2005
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Major Fleet Exercise
ENT BATGRU C2X (DATES TBD)
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
March 2005
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
ENT BATGRU C2X (DATES TBD)
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX

Third Quarter FY 05


April 2005
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
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= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
May 2005
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
PERU SSK DEPLOYMENT (C2F AOR) (PLANNED)
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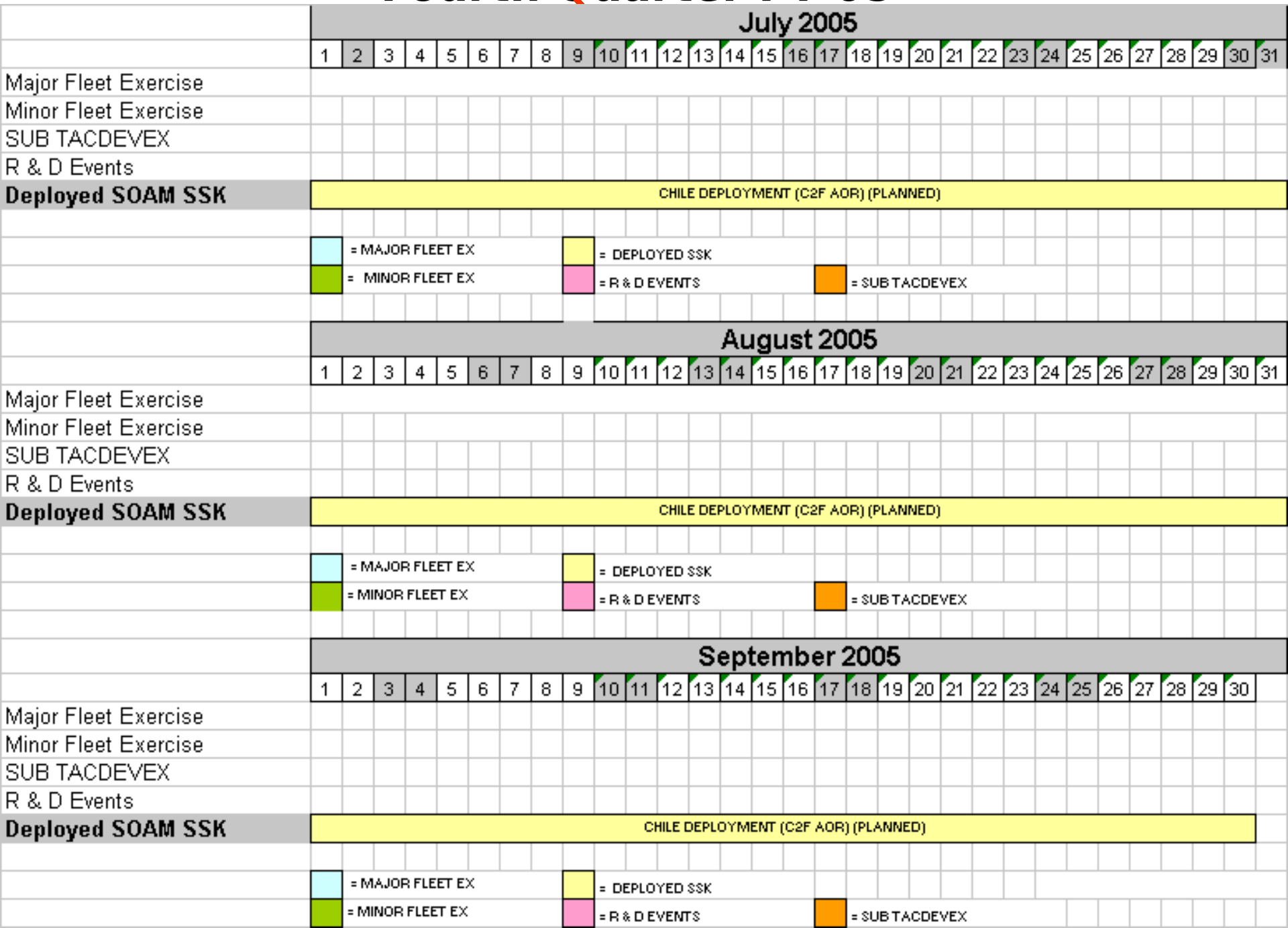
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
June 2005
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX

Fourth Quarter FY 05


July 2005
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
CHILE DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
August 2005
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
CHILE DEPLOYMENT (C2F AOR) (PLANNED)
= MAJOR FLEET EX
= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX
September 2005
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Major Fleet Exercise
Minor Fleet Exercise
SUB TACDEVEX
R & D Events
Deployed SOAM SSK
CHILE DEPLOYMENT (C2F AOR) (PLANNED)
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= DEPLOYED SSK
= MINOR FLEET EX
= R & D EVENTS
= SUB TACDEVEX

Conclusions & Recommendations

- From 2003 to 2006 there will be few subs available during the IDTC
  - –Choices are to reduce OPTEMPO, reduce support for C2X/JTFEX, or look to other means such as the SSK
  - –Average number of subs available to support C2X and JTFEX (Both Blue and Orange) is 1. (There will be more or less at times due to peaks and valleys in scheduling.)

Use of SOAM SSKs is both prudent and cost effective!